Amendments to the Specification:

Please replace the PCT abstract with the attached Abstract of the Disclosure on a separate sheet as required by the Examiner. This amendment adds no new matter.

Please replace the paragraph on page 2, lines 18-28, with the following amended paragraph:

One major practical problem in this area of research is the scarcity of HS available from natural sources. A commonly used approach is to employ the widely available, structurally related, but generally more heavily sulfated molecule heparin, which is itself a very widely-used antithrombotic agent. Heparin, which shares the same underlying structural framework as HS, is considered by some to be a form of HS and exhibits a range of compositions dependent on its origin. However, it possesses higher overall levels of sulfation and, generally, contains a lower proportion of glucuronic acid and N-acetyl glucosamine residues. While these properties have sometimes [[lead]] led heparan to be considered a more homogenous compound than HS, it is nevertheless still considered a relatively complex molecule.

Please replace the paragraph bridging pages 7-8, with the following amended paragraph:

The term "heparan sulfate" is defined herein to include heparan sulfate, heparin, heparan sulfate-like GAGs or other heparin-like GAGs either in the form of polysaccharides, often considered to be longer than 20 monosaccharide units, or in the form of oligosaccharides, generally considered in the art to comprise fewer than 20 monosaccharide units although the boundary between the two is essentially arbitrary. Some authorities consider heparin to be a subclass of heparan sulfate, others that it is distinct. In any case, both are members of the wider glycosaminoglycan family. Herein, "heparan sulfate" also means any derivative of the above list formed by combinations of modifications found in the prior art. Thus the methods of the invention may be used to further modify heparan sulfate derivatives made by methods other than those described herein. "~~heparan~~ "Heparan sulfate derivatives" means compounds produced

from the methods of the invention, including the modifications of heparin or heparan sulfate described herein and any further method steps, for example digestion of a modified polysaccharide, to produce a pool of oligosaccharides, or other chemical modifications. "Heparin or heparan sulfate" used herein includes glycosaminoglycan molecules derived from natural sources, or those arising from chemical modification of these compounds, or fragments, multivalent complexes or aggregations derived from these.

Please replace the paragraph on page 10, lines 6-19, with the following amended paragraph:

The general structure of heparan sulfate (and heparin) is based on a repeating disaccharide composed of alpha (1-4) linked uronic acid (either alpha-L- iduronic acid or beta D-glucuronic acid) 1-4 linked to alpha-D-glucosamine to form a linear polysaccharide, which is then decorated with a combination of O- and N-sulfates and/or N-acetyl and free-amines. In the case of O-sulfates, these may occur at position-2 of the iduronate residue (and also more rarely at position-2 of glucuronate) and position-6 of glucosamine (and occasionally at position-3 of glucosamine). At the amino function of glucosamine, N-sulfate, N-acetyl and (it has been suggested) free amines can exist. Considering only the predominant repeating disaccharide of heparin;-4) alpha-L-iduronate (1-4) alpha-D-glucosamine (1-, ~~There~~ there are twelve possible theoretical combinations of substitutions (2 at iduronate-2: hydroxyl or0-sulfate, 2 at glucosamine-6; hydroxyl or 0-sulfate and 3 at glucosamine-N; free amine, N-sulfate or N- acetyl, giving 2x2x3=12 combinations).

Please delete the paragraph at page 22, lines 18-23, which starts with "(iv.) determining at least one functional and one structural property… :"

Please replace the paragraph on page 23, lines 1-4, with the following amended paragraph:

Other types of tuning, for example, optimizing the ratio of two activities, or the ratio between an activity and some structural property, or two structural properties ~~(e.g. size~~

~~and charge)are~~ (e.g., size and charge) are variants of the above and are hence considered within the scope of the invention.

Please replace the paragraph on page 23, lines 15-18, with the following amended paragraph:

In an additional embodiment, the invention provides a method wherein the structural determination(s) made at step (ii) or (iv) above is/are provided by the ~~discreet~~ discrete known location, in a spatially separated library, of the compounds having said particular structural and/or functional characteristics.

Please replace the paragraph on page 24, lines 7-15, with the following amended paragraph:

There are a wide range of screening methods and approaches known in the ~~artwhich~~ art which can be employed to detect or measure a functional property of a component or components of the libraries (for example, Guimond, S. E. and Turnbull, J. E. (1999) Curr Biol. 9,1343-1346. Irie, A., Yates, E. A. , Turnbull, J. E. and Holt, C. E. (2002). Development. 129, 61-70. Kreuger, J. , Salmivirta, M. , Sturiale, L., Gimenez-Gallego, G. and Lindahl, U. (2001) J Biol Chem. 276,30744-52. Nadkarni, V.D. and Linhardt, R.J. (1997) Biotechniques, 23, 382-5. Nadkarni, V.D., Pervin, A. and Linhardt, R.J. (1994), Anal. Biochem. 222, 59-67).

Please replace the paragraph on page 25, lines 13-16, with the following amended paragraph:

In a further embodiment of the first and second aspects of the invention provides a library in the form of modified heparin sulfate derivatives in which the compounds contained therein are spatially separated at ~~discreet~~ discrete known locations. This facilitates rapid screening and tuning.

Please replace the paragraph on page 40, lines 14-20, with the following amended paragraph:

5. separate these pools of mixed oligosaccharides e.g. by hplc and assay fractions for a particular activity of interest

A sample of the digestion (e. g.0.5mg in 1 ml water) is added to ~~a~~strong a strong anion exchange column and eluted with a linear gradient of NaCI (0-2M, pH 7, over 120 minutes at 1 ml per minute) monitoring the elution position of products by their absorbance at 232 nm. The eluant is fractionated into 1 ml tubes (e. g. at 1 ml/min). Samples can be assayed for a particular activity of interest.